NAVAL MEDICAL RESEARCH INSTITUTE NATIONAL NAVAL MEDICAL CENTER BETHESDA, MARYLAND - 20014

27 June 1973

Dr. Joshua Lederberg
Department of Genetics
Stanford University School of
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Stanford, California 94305

Dear Dr. Lederberg:

Dr. Tyeryar asked me to reply to your recent letter in which you commented on our DNA work on rickettsiae and on the desirability to extend our experiments to a study of the nature of the Weil-Felix reaction by DNA homology.

On many occasions, I have been tempted to perform DNA homology tests between species of Rickettsia and Proteus OX-19, OX-2, and OX-K. As you may know, we have carried out extensive homology tests on other genera and this technique presents no particular difficulty for us. However, on our very limited budget, I hesitate to study the remote possibility of a phylogenetic relationship between Rickettsia and Proteus. The cross-reactions are most likely due to glycoproteins containing identical carbohydrate fragments. The DNA segments coding for these fractions are probably too small to elicit measurable bindings between two heterologous DNA. I regret, therefore, that at the present time we can not plan to put the hypothesis of a phylogenetic relationship of the two organisms to a final test.

Sincerely yours,

EMILIO WEISS, Ph.D.

Director

Department of Microbiology

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